

Click here for
[DISCLAIMER](#)

Document starts on next page



MSPC Advisory Circular

ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF AIR PROGRAMS • MOBILE SOURCE POLLUTION CONTROL PROGRAM

A/C No. 18

September 7, 1972

Page 1 of 3 pages

Subject: Approval of Use of Instruments Other Than Those Specified in
the Motor Vehicle Emission Control Regulations

A. Purpose

The purpose of this Advisory Circular is to provide light duty vehicle manufacturers and heavy duty diesel engine manufacturers information on the procedure to allow use of acceptable alternates to instruments specified in the Federal motor vehicle emission control regulations.

B. Background

1. Section 85.124(b)(2) of the Federal motor vehicle emission control regulations (35 F.R. 17228, November 10, 1970) provides for approval of alternate light extinction meters for the measurement of smoke from heavy duty diesel engines. Section 85.81(c) of the regulations (35 F.R. 12652, July 2, 1971) provides for approval of alternate analyzers for the measurement of exhaust gas from light duty vehicles. Advance approval of these instruments is required if their configuration is different from that prescribed in the regulations. Whether or not these instruments operate on the same principle as the instruments prescribed in the regulations, approval for their use may only be given if the instruments yield substantially equivalent results.

2. Section 85.81(b) of the regulations (35 F.R. 17228, November 10, 1970) provides for the use of other types of constant volume samplers if shown to yield substantially equivalent results. Though prior approval is not required, a manufacturer may wish to have advance assurance that data collected with a non-standard constant volume sampler will be acceptable.

3. For example, approval has been granted for the use of dispersive infrared equipment to measure light duty vehicle exhaust carbon monoxide and carbon dioxide, and for the use of ultraviolet equipment to measure light duty vehicle exhaust nitric oxide and nitrogen dioxide through the use of a thermal converter. This approval has been given specifically to those manufacturers who have requested it.

C. Procedure for Obtaining Approval

1. Approval of the use of alternate instruments is given specifically to the manufacturer who requests it. Approval of an alternate instrument for one manufacturer does not constitute blanket approval of use of such instru-

ment for other manufacturers.

2. A request for approval of the use of alternate instrumentation shall be made to the Director, Division of Certification and Surveillance, in writing and shall be signed by an authorized representative of the light duty vehicle or heavy duty engine manufacturer. The request shall be included in the Part I Application and be addressed to the Director, Division of Certification and Surveillance, EPA, 2565 Plymouth Road, Ann Arbor, Michigan 48105.

3. The request shall include the following information:

- a. Identification of the instrumentation to be used and a description of the method of operation and physical arrangement of the instrumentation, including:
 - 1) pollutants detected by the instruments
 - 2) instrument sensitivity in terms of amount of pollutant measured per chart division
 - 3) interfering substances and extent of interference in terms of equivalent of pollutant measured
 - 4) description of any special sample handling or treatment
 - 5) description of potential safety hazards, if any
- b. Results of tests comparing equipment prescribed in the regulations to the instruments in question in order to support the contention that the latter yield equivalent results. These results may be derived from tests performed by the light duty vehicle or heavy duty engine manufacturer, by the instrument manufacturer, by a competent independent laboratory, or by a combination of these sources.
- c. In the case of a request for approval for use of an instrument that is in all material respects the same as an instrument for which approval for use has been granted to another manufacturer, the Director, Division of Certification and Surveillance, may modify and/or reduce the information which needs to be submitted for approval.

4. The Director, Division of Certification and Surveillance, may require that one or more of the subject instruments be submitted for evaluation. The evaluation procedure used will be devised to suit the instrument being evaluated and will include such criteria as construction, ease of operation, sensitivity to pollutant of interest, interferences, background noise level, and comparison to the prescribed instruments.

5. Based upon the information provided in the request for use, and such other information as may need to be requested, approval or disapproval will

be given in writing for use of the instrument for which approval is requested. If the Division of Certification and Surveillance has made tests with an instrument furnished by the manufacturer, the description of the test method and the test results will be supplied along with the decision. If the decision is to disapprove the use of the instrument, the reasons for disapproval will be stated.

Mobile Source Pollution Control
Program